

Robert J Madix

List of Publications by Year in descending order

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237
papers

10,666
citations

31974

53
h-index

45310

90
g-index

239
all docs

239
docs citations

239
times ranked

5885
citing authors

#	ARTICLE	IF	CITATIONS
1	The selective oxidation of CH ₃ OH to H ₂ CO on a copper(110) catalyst. Journal of Catalysis, 1978, 53, 208-227.	6.2	541
2	The oxidation of methanol on a silver (110) catalyst. Surface Science, 1978, 76, 531-558.	1.9	385
3	O ₂ Activation by Metal Surfaces: Implications for Bonding and Reactivity on Heterogeneous Catalysts. Chemical Reviews, 2018, 118, 2816-2862.	47.7	363
4	Vibrational spectra of molecular and atomic oxygen on Ag(110). Chemical Physics Letters, 1980, 76, 294-297.	2.6	259
5	Adsorption of oxygen and hydrogen on Au(110)-(1 Å ⁻²). Surface Science, 1986, 169, 347-356.	1.9	252
6	Dynamic restructuring drives catalytic activity on nanoporous gold-silver alloy catalysts. Nature Materials, 2017, 16, 558-564.	27.5	243
7	The adsorption and reaction of low molecular weight alkanes on metallic single crystal surfaces. Surface Science Reports, 2003, 50, 107-199.	7.2	184
8	Brønsted basicity of atomic oxygen on the gold(110) surface: reactions with methanol, acetylene, water, and ethylene. Journal of the American Chemical Society, 1987, 109, 1708-1714.	13.7	174
9	Molecular beam studies of gas-surface collision dynamics. Progress in Surface Science, 1991, 38, 1-102.	8.3	167
10	Selectivity Control in Gold-Mediated Esterification of Methanol. Angewandte Chemie - International Edition, 2009, 48, 4206-4209.	13.8	167
11	Role of Defects in the Adsorption of Aliphatic Alcohols on the TiO ₂ (110) Surface. Journal of Physical Chemistry B, 2002, 106, 10680-10692.	2.6	162
12	Reactive scattering from solid surfaces. Surface Science Reports, 1983, 3, 413-495.	7.2	151
13	A vibrational study of formic acid interaction with clean and oxygen-covered silver (110) surfaces. Surface Science, 1981, 105, 177-195.	1.9	145
14	The oxidation of ethanol on Cu(110) and Ag(110) catalysts. Applications of Surface Science, 1978, 1, 303-328.	1.0	144
15	Nanoporous Gold: Understanding the Origin of the Reactivity of a 21st Century Catalyst Made by Pre-Columbian Technology. ACS Catalysis, 2015, 5, 6263-6270.	11.2	140
16	Dissociative chemisorption of methane on Pt(111). Surface Science, 1989, 215, 1-28.	1.9	130
17	The oxidation of H ₂ CO on a copper(110) surface. Surface Science, 1979, 84, 375-386.	1.9	124
18	The decomposition of formic acid on Ni(100). Surface Science, 1979, 79, 394-412.	1.9	121

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19	Unraveling molecular transformations on surfaces: a critical comparison of oxidation reactions on coinage metals. <i>Chemical Society Reviews</i> , 2008, 37, 2243.	38.1	120
20	Surface-Mediated Self-Coupling of Ethanol on Gold. <i>Journal of the American Chemical Society</i> , 2009, 131, 5757-5759.	13.7	119
21	Precursors and trapping in the molecular chemisorption of CO on Ni(100). <i>Surface Science</i> , 1987, 180, 47-76.	1.9	102
22	Achieving Optimum Selectivity in Oxygen Assisted Alcohol Cross-Coupling on Gold. <i>Journal of the American Chemical Society</i> , 2010, 132, 16571-16580.	13.7	102
23	Identification of the intermediates in the dehydration of formic acid on Ni(110) by high resolution electron energy loss vibrational spectroscopy. <i>Surface Science</i> , 1983, 125, 481-489.	1.9	101
24	The characterization of surface carbides of tungsten. <i>Journal of Catalysis</i> , 1978, 54, 414-425.	6.2	97
25	Trapping dynamics of xenon on Pt(111). <i>Surface Science</i> , 1990, 226, 180-190.	1.9	96
26	Electronic structure and growth of vanadium on TiO ₂ (110). <i>Surface Science</i> , 2000, 450, 12-26.	1.9	96
27	Different binding sites for methanol dehydrogenation and deoxygenation on stoichiometric and defective TiO ₂ (110) surfaces. <i>Surface Science</i> , 2003, 544, 241-260.	1.9	96
28	Characterization of the Acid-Base Properties of the TiO ₂ (110) Surface by Adsorption of Amines. <i>Journal of Physical Chemistry B</i> , 2003, 107, 3225-3233.	2.6	96
29	Low and high coverage determinations of the rate of carbon monoxide adsorption and desorption from Pt(110). <i>Journal of Chemical Physics</i> , 1980, 73, 3480-3485.	3.0	91
30	Modulated beam relaxation spectrometry. <i>Surface Science</i> , 1974, 46, 317-341.	1.9	89
31	Epoxidation of olefins on silver: conversion of norbornene to norbornene oxide by atomic oxygen on silver(110). <i>Journal of the American Chemical Society</i> , 1988, 110, 8540-8541.	13.7	87
32	Chemical relaxation molecular beam studies of reactive gas-solid scattering. <i>Surface Science</i> , 1971, 24, 264-287.	1.9	86
33	Dynamics of molecular CH ₄ adsorption on Pt(111). <i>Surface Science</i> , 1989, 222, 213-246.	1.9	82
34	Reaction Kinetics and Mechanism on Metal Single Crystal Surfaces. <i>Advances in Catalysis</i> , 1980, 29, 1-53.	0.2	81
35	Subsurface Hydrogen Diffusion into Pd Nanoparticles: Role of Low-Coordinated Surface Sites and Facilitation by Carbon. <i>Journal of Physical Chemistry C</i> , 2012, 116, 3539-3544.	3.1	79
36	Preparation and reactions of V ₂ O ₅ supported on TiO ₂ (110). <i>Surface Science</i> , 2001, 474, L213-L216.	1.9	76

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37	Ozone-Activated Nanoporous Gold: A Stable and Storable Material for Catalytic Oxidation. ACS Catalysis, 2015, 5, 4237-4241.	11.2	76
38	Precious metal magic: catalytic wizardry. Materials Today, 2011, 14, 134-142.	14.2	75
39	Dynamics of Surface Alloys: Rearrangement of Pd/Ag(111) Induced by CO and O ₂ . Journal of Physical Chemistry C, 2019, 123, 8312-8323.	3.1	75
40	Chemisorption of dioxygen on the Ag(110) surface. Journal of Chemical Physics, 1988, 88, 3988-3995.	3.0	73
41	Stochastic simulations of the trapping of ethane on Pt(111) from a realistic potential: The roles of energy transfer processes and surface corrugation. Journal of Chemical Physics, 1996, 104, 3134-3142.	3.0	69
42	Partial oxidation of methanol to formaldehyde on a model supported monolayer vanadia catalyst: vanadia on TiO ₂ (). Surface Science, 2002, 496, 51-63.	1.9	69
43	Highly Selective Acylation of Dimethylamine Mediated by Oxygen Atoms on Metallic Gold Surfaces. Angewandte Chemie - International Edition, 2010, 49, 394-398.	13.8	69
44	Vibrational characterization of carbon monoxide adsorption on sulfur modified Ni(100) surfaces. Surface Science, 1984, 143, 46-56.	1.9	67
45	Oxygen-hydrogen and carbon-hydrogen bond activation in ethylene glycol by atomic oxygen on silver(110): heterometallacycle formation and selective dehydrogenation to glyoxal. Journal of the American Chemical Society, 1989, 111, 3570-3577.	13.7	63
46	van der Waals Interactions Determine Selectivity in Catalysis by Metallic Gold. Journal of the American Chemical Society, 2014, 136, 13333-13340.	13.7	63
47	Oxidation of tert-butyl alcohol to isobutylene oxide on a silver(110) surface: the role of unactivated carbon-hydrogen bonds in product selectivity. Journal of the American Chemical Society, 1989, 111, 3826-3835.	13.7	61
48	Achieving High Selectivity for Alkyne Hydrogenation at High Conversions with Compositionally Optimized PdAu Nanoparticle Catalysts in Raspberry Colloid-Templated SiO ₂ . ACS Catalysis, 2020, 10, 441-450.	11.2	61
49	Alkane dissociation dynamics on Pt(110) at (1 Å ⁻²). Journal of Chemical Physics, 1993, 98, 9963-9976.	3.0	58
50	Oxygen-assisted cross-coupling of methanol with alkyl alcohols on metallic gold. Chemical Science, 2010, 1, 310.	7.4	58
51	Vibrational spectroscopy of sulfur dioxide on the silver(110) surface: comparison to inorganic complexes. Langmuir, 1986, 2, 406-411.	3.5	57
52	Selective Oxygen-Assisted Reactions of Alcohols and Amines Catalyzed by Metallic Gold: Paradigms for the Design of Catalytic Processes. ACS Catalysis, 2017, 7, 965-985.	11.2	56
53	Molecular propane adsorption dynamics on Pt(110) at (1 Å ⁻²). Surface Science, 1993, 297, 253-271.	1.9	55
54	Ethane dissociation dynamics on Pt(111). Surface Science, 1992, 275, 265-280.	1.9	53

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55	Dilute Pd/Au Alloy Nanoparticles Embedded in Colloid-Templated Porous SiO ₂ : Stable Au-Based Oxidation Catalysts. <i>Chemistry of Materials</i> , 2019, 31, 5759-5768.	6.7	50
56	Dilute Alloys Based on Au, Ag, or Cu for Efficient Catalysis: From Synthesis to Active Sites. <i>Chemical Reviews</i> , 2022, 122, 8758-8808.	47.7	50
57	Monitoring surface reactions with scanning tunneling microscopy: CO oxidation on p(2 Å ⁻¹)-O pre-covered Cu(110) at 400 K. <i>Surface Science</i> , 1994, 319, L34-L40.	1.9	49
58	The reactivity of sulfur-containing molecules on noble metal surfaces. <i>Surface Science</i> , 1994, 311, 159-171.	1.9	49
59	Molecular adsorption of alkanes on platinum surfaces: A predictive theoretical model. <i>Journal of Chemical Physics</i> , 1996, 105, 1609-1620.	3.0	49
60	Dry Dehydrogenation of Ethanol on Pt-Cu Single Atom Alloys. <i>Topics in Catalysis</i> , 2018, 61, 328-335.	2.8	49
61	Predicting Gold-Mediated Catalytic Oxidative-Coupling Reactions from Single Crystal Studies. <i>Accounts of Chemical Research</i> , 2014, 47, 761-772.	15.6	47
62	Evolution of Metastable Structures at Bimetallic Surfaces from Microscopy and Machine-Learning Molecular Dynamics. <i>Journal of the American Chemical Society</i> , 2020, 142, 15907-15916.	13.7	47
63	Adsorbate-assisted adsorption: Trapping dynamics of Xe on Pt(111) at nonzero coverages. <i>Journal of Chemical Physics</i> , 1991, 95, 5437-5443.	3.0	46
64	Hydrogen bonding on iron: correlation of adsorption and desorption states on Fe(100) and perturbation of the Fe-H bond with coadsorbed CO. <i>Surface Science</i> , 1996, 347, 249-264.	1.9	46
65	How Does Nanoporous Gold Dissociate Molecular Oxygen?. <i>Journal of Physical Chemistry C</i> , 2016, 120, 16636-16640.	3.1	46
66	The adsorption and reaction of simple molecules on metal surfaces. <i>Surface Science</i> , 1979, 89, 540-553.	1.9	45
67	Active sites for methanol partial oxidation on nanoporous gold catalysts. <i>Journal of Catalysis</i> , 2016, 344, 778-783.	6.2	45
68	An examination of adsorbed oxygen molecules on Ag(110) by UPS. <i>Chemical Physics Letters</i> , 1983, 97, 85-88.	2.6	44
69	The effects of structured overlayers of sulfur on the kinetics and mechanism of simple reactions on Pt(111): I. Formaldehyde decomposition. <i>Applications of Surface Science</i> , 1981, 7, 241-275.	1.0	43
70	Noncovalent Bonding Controls Selectivity in Heterogeneous Catalysis: Coupling Reactions on Gold. <i>Journal of the American Chemical Society</i> , 2016, 138, 15243-15250.	13.7	43
71	Crossing the great divide between single-crystal reactivity and actual catalyst selectivity with pressure transients. <i>Nature Catalysis</i> , 2018, 1, 852-859.	34.4	42
72	Enhancing catalytic performance of dilute metal alloy nanomaterials. <i>Communications Chemistry</i> , 2020, 3, .	4.5	41

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73	On the H ₂ -D ₂ exchange on stepped platinum surfaces. <i>Surface Science</i> , 1976, 58, 590-596.	1.9	40
74	Molecular adsorption and growth of n-butane adlayers on Pt(111). <i>Surface Science</i> , 2001, 470, 226-242.	1.9	40
75	Partial oxidation of higher olefins on Ag(111): Conversion of styrene to styrene oxide, benzene, and benzoic acid. <i>Surface Science</i> , 2006, 600, 5025-5040.	1.9	40
76	Origin of the selectivity in the gold-mediated oxidation of benzyl alcohol. <i>Surface Science</i> , 2012, 606, 1129-1134.	1.9	40
77	The desorption kinetics of water and formic acid from Ni(110) following low-temperature adsorption. <i>Journal of Catalysis</i> , 1978, 51, 47-63.	6.2	39
78	Active oxygen on Group VIII metals: activation of formic acid and formaldehyde on Pd(100). <i>Journal of the American Chemical Society</i> , 1988, 110, 397-400.	13.7	39
79	Carbon-carbon bond activation in the 1,2-ethanedioxy heterometallacycle by atomic oxygen on Ag(110). <i>Surface Science</i> , 1989, 214, 276-288.	1.9	39
80	Oxygen-Activated Combustion of Alkenes on the Pd(100) Surface. <i>Journal of the American Chemical Society</i> , 1995, 117, 5523-5530.	13.7	39
81	Exploiting basic principles to control the selectivity of the vapor phase catalytic oxidative cross-coupling of primary alcohols over nanoporous gold catalysts. <i>Journal of Catalysis</i> , 2015, 329, 78-86.	6.2	39
82	Selectivity Limitations in the Heterogeneous Epoxidation of Olefins: Branching Reactions of the Oxametallacycle Intermediate in the Partial Oxidation of Styrene. <i>Journal of the American Chemical Society</i> , 2006, 128, 1034-1035.	13.7	38
83	CO ₂ + O on Ag(110): Stoichiometry of Carbonate Formation, Reactivity of Carbonate with CO, and Reconstruction-Stabilized Chemisorption of CO ₂ . <i>Journal of Physical Chemistry B</i> , 2001, 105, 3878-3885.	2.6	37
84	Ag/Au Mixed Sites Promote Oxidative Coupling of Methanol on the Alloy Surface. <i>Chemistry - A European Journal</i> , 2014, 20, 4646-4652.	3.3	37
85	The adsorption and reaction of Acetonitrile on clean and oxygen covered Ag(110) surfaces. <i>Surface Science</i> , 1986, 175, 445-464.	1.9	36
86	The adsorption of hydrogen sulfide on clean and sulfided Au(110). <i>Surface Science</i> , 1991, 258, 359-375.	1.9	36
87	Surface explosion: HCOOH on Ni(110). <i>Surface Science</i> , 1974, 42, 329-330.	1.9	35
88	The adsorption dynamics of small alkanes on (111) surfaces of platinum group metals. <i>Surface Science</i> , 2004, 557, 215-230.	1.9	34
89	Surface Structure Dependence of the Dry Dehydrogenation of Alcohols on Cu(111) and Cu(110). <i>Journal of Physical Chemistry C</i> , 2017, 121, 12800-12806.	3.1	34
90	Reactivity of Sulfur-Containing Molecules on Noble Metal Surfaces. 4. Benzenethiol on Au(110). <i>Journal of the American Chemical Society</i> , 1994, 116, 3020-3027.	13.7	33

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91	Real-Time Observation of Surface Reactivity and Mobility with Scanning Tunneling Microscopy. <i>Accounts of Chemical Research</i> , 2003, 36, 471-480.	15.6	33
92	Structure Sensitivity in the Partial Oxidation of Styrene, Styrene Oxide, and Phenylacetaldehyde on Silver Single Crystals. <i>Journal of Physical Chemistry C</i> , 2007, 111, 3675-3679.	3.1	33
93	Cesium Promotion in Styrene Epoxidation on Silver Catalysts. <i>Journal of the American Chemical Society</i> , 2010, 132, 434-435.	13.7	33
94	Surface-mediated cycloaddition: 1,4-addition of atomically adsorbed oxygen to 1,3-butadiene on silver(110). <i>Journal of the American Chemical Society</i> , 1991, 113, 9848-9851.	13.7	32
95	Surface corrugation effects: molecular ethane adsorption dynamics on rigid adsorbate-covered surfaces of Pt(111). <i>Surface Science</i> , 1998, 395, 148-167.	1.9	32
96	The adsorption dynamics of molecular carbon dioxide on Pt() and Pd(). <i>Surface Science</i> , 2002, 497, 356-372.	1.9	32
97	Enhanced stability of t-butanol reaction intermediates on oxygen covered Cu(110): Cleavage of unactivated C-H bonds on metal surfaces. <i>Surface Science</i> , 1989, 214, 396-406.	1.9	31
98	Partial oxidation of hydrocarbons on silver: conversion of 1-butene to maleic anhydride by atomically adsorbed oxygen on Ag(110). <i>Surface Science</i> , 1991, 253, 13-23.	1.9	31
99	The kinetic isotope effect for C-H bond activation on Cu(110): the effects of tunnelling. <i>Surface Science</i> , 1992, 277, 246-252.	1.9	31
100	Atom-resolved investigation of surface reactions: ammonia and oxygen on Cu(110) at 300 and 400 K. <i>Faraday Discussions</i> , 1996, 105, 139.	3.2	31
101	Direct dissociative chemisorption of alkanes on Pt(111): Influence of molecular complexity. <i>Journal of Chemical Physics</i> , 2000, 112, 396-407.	3.0	31
102	Adsorption and reaction of sulfur dioxide with Cu(110) and Cu(110)-p(2 \times 1)-O. <i>Journal of Chemical Physics</i> , 2002, 116, 4698-4706.	3.0	31
103	Activated Metallic Gold as an Agent for Direct Methoxycarbonylation. <i>Journal of the American Chemical Society</i> , 2011, 133, 20378-20383.	13.7	31
104	The mechanism of acetate oxidation on Ag(110). <i>Surface Science</i> , 1986, 172, 598-614.	1.9	30
105	Monolayer structure of phenoxy species on Cu(110): an STM study. <i>Surface Science</i> , 1995, 341, L1065-L1071.	1.9	30
106	Surface microstructure effects: molecular ethane adsorption dynamics on Pt(110)-(1 \times 2). <i>Surface Science</i> , 1996, 365, 683-700.	1.9	30
107	Hydrogenation of Weakly Rehybridized Ethylene on Fe(100) \hat{a} H: \hat{A} Ethyl Group Formation. <i>Journal of the American Chemical Society</i> , 1996, 118, 5062-5067.	13.7	30
108	Reactivity of Stoichiometric and Defective TiO ₂ (110) Surfaces toward DCOOD Decomposition. <i>Journal of Physical Chemistry B</i> , 2003, 107, 11709-11720.	2.6	30

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109	Continuous Catalytic Production of Methyl Acrylates from Unsaturated Alcohols by Gold: The Strong Effect of C=C Unsaturation on Reaction Selectivity. <i>ACS Catalysis</i> , 2016, 6, 1833-1839.	11.2	30
110	The Adsorption Dynamics of Molecular Methane, Propane, and Neopentane on Pd(111): Theory and Experiment. <i>Journal of Physical Chemistry B</i> , 2002, 106, 8248-8257.	2.6	29
111	New Architectures for Designed Catalysts: Selective Oxidation using AgAu Nanoparticles on Colloid-Templated Silica. <i>Chemistry - A European Journal</i> , 2018, 24, 1833-1837.	3.3	29
112	Chemical relaxation molecular beam studies of reactive gas-solid scattering. <i>Surface Science</i> , 1971, 24, 288-301.	1.9	28
113	Oxidation of tert-butyl alcohol to isobutylene oxide: rate-limiting carbon-hydrogen activation by a Ag(110) surface. <i>Journal of the American Chemical Society</i> , 1987, 109, 8082-8083.	13.7	28
114	The adsorption and reaction of 1,2-propanediol on Ag(110) under oxygen lean conditions. <i>Surface Science</i> , 1994, 303, 279-296.	1.9	28
115	Hydrogen migration at restructuring palladium-silver oxide boundaries dramatically enhances reduction rate of silver oxide. <i>Nature Communications</i> , 2020, 11, 1844.	12.8	28
116	The kinetics and mechanism of catalytic reactions by molecular beam relaxation spectroscopy: HCOOH decomposition. <i>Surface Science</i> , 1977, 65, 287-313.	1.9	27
117	The growth of vanadium oxide on alumina and titania single crystal surfaces. <i>Faraday Discussions</i> , 1999, 114, 67-84.	3.2	27
118	Mesoscopic restructuring and mass transport of metal atoms during reduction of the Ag(111)-p(4 \times 4)-O surface with CO. <i>Journal of Chemical Physics</i> , 2007, 126, 084707.	3.0	27
119	Facilitating hydrogen atom migration via a dense phase on palladium islands to a surrounding silver surface. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2020, 117, 22657-22664.	7.1	26
120	Reactivity of Sulfur-Containing Molecules on Noble Metal Surfaces. 2. tert-Butyl Thioalcohol on Au(110). <i>Journal of the American Chemical Society</i> , 1994, 116, 3012-3019.	13.7	25
121	A variable temperature scanning tunneling microscope for the study of surface reactions in ultrahigh vacuum. <i>Review of Scientific Instruments</i> , 1995, 66, 4552-4556.	1.3	25
122	Competitive Reactions of Atomic Oxygen with Acetone on Ag(110): Nucleophilicity Versus Basicity. <i>Journal of the American Chemical Society</i> , 1995, 117, 2301-2312.	13.7	25
123	The dynamical origin of non-normal energy scaling and the effect of surface temperature on the trapping of low molecular weight alkanes on Pt(111). <i>Surface Science</i> , 1997, 380, 489-496.	1.9	25
124	Reactivity of methanol on TiO ₂ nanoparticles supported on the Au(111) surface. <i>Surface Science</i> , 2005, 591, 1-12.	1.9	25
125	Entropic Control of HD Exchange Rates over Dilute Pd-in-Au Alloy Nanoparticle Catalysts. <i>ACS Catalysis</i> , 2021, 11, 6971-6981.	11.2	25
126	The dynamics of precursor adsorption: ethane on Pt(111). <i>Surface Science</i> , 1990, 237, L424-L431.	1.9	24

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127	Evolution of steady-state material properties during catalysis: Oxidative coupling of methanol over nanoporous Ag _{0.03} Au _{0.97} . <i>Journal of Catalysis</i> , 2019, 380, 366-374.	6.2	24
128	Oxidative coupling and ring opening of furan on silver(110): formation of maleic anhydride, benzene, and bifuran. <i>Journal of the American Chemical Society</i> , 1993, 115, 729-736.	13.7	23
129	Alkene and Arene Combustion on Pd(111). <i>Journal of Catalysis</i> , 1998, 178, 520-532.	6.2	23
130	Self-assembly of acetate adsorbates drives atomic rearrangement on the Au(110) surface. <i>Nature Communications</i> , 2016, 7, 13139.	12.8	23
131	Reactions of weak organic acids with oxygen atoms on Ag(100): Facile and selective conversion of cyclohexene to benzene. <i>Surface Science</i> , 1990, 226, L71-L78.	1.9	22
132	π, π-allyl, and trimethylenemethane complexes derived from isobutylene adsorption on oxygen-activated Ag(110). <i>Surface Science</i> , 1992, 262, 51-67.	1.9	22
133	Site blocking by hydrogen: CO on clean and H-presaturated Fe(100). <i>Surface Science</i> , 1992, 271, 81-84.	1.9	22
134	The effect of site distribution on desorption kinetics: carbon monoxide from Ni(100). <i>Surface Science</i> , 1994, 301, 83-88.	1.9	22
135	Trapping dynamics of isobutane, n-butane, and neopentane on Pt(111): Effects of molecular weight and structure. <i>Journal of Chemical Physics</i> , 1999, 110, 10585-10598.	3.0	22
136	Oxidation of Styrene and Phenylacetaldehyde on Ag(111): Evidence for Transformation of Surface Oxametallacycle. <i>Journal of Physical Chemistry C</i> , 2008, 112, 4725-4734.	3.1	22
137	Active site densities, oxygen activation and adsorbed reactive oxygen in alcohol activation on npAu catalysts. <i>Faraday Discussions</i> , 2016, 188, 57-67.	3.2	22
138	The application of flash desorption spectroscopy to chemical reactions on surfaces: Temperature programmed reaction spectroscopy. <i>Critical Reviews in Solid State and Materials Sciences</i> , 1978, 7, 143-152.	12.3	21
139	Determination of adsorbate coverages by leed and XPS. <i>Journal of Electron Spectroscopy and Related Phenomena</i> , 1980, 20, 281-287.	1.7	21
140	Surface corrugation effects on the adsorption dynamics of xenon on Pt(110) $\hat{\sim}$ (1 Å ⁻²). <i>Surface Science</i> , 1993, 297, L148-L155.	1.9	21
141	C ₁ -C and C ₁ -H bond activation of 1,2-propanedioxy by atomic oxygen on Ag(110): Effects of CO-adsorbed oxygen on reaction mechanism. <i>Surface Science</i> , 1994, 303, 297-311.	1.9	21
142	Alkane activation via precursor-mediated dissociation on Ir(110). <i>Surface Science</i> , 1995, 323, 1-5.	1.9	21
143	Site-specific reactivity of oxygen at Cu(110) step defects: an STM study of ammonia dehydrogenation. <i>Surface Science</i> , 1996, 367, L95-L101.	1.9	21
144	Direct collisionally activated and trapping-mediated dissociative chemisorption of neopentane on clean Pt(111): the activity of surface defect sites. <i>Surface Science</i> , 1997, 393, 150-161.	1.9	21

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145	Kinetics of hydroxyl recombination on clean and oxygen-covered silver(110). <i>Langmuir</i> , 1985, 1, 526-528.	3.5	20
146	Kinetic isotope effect in direct ethane dissociation on Pt(111). <i>Surface Science</i> , 1993, 294, 420-428.	1.9	20
147	Anomalous effects of weak chemisorption on desorption kinetics of alkenes: The desorption of propylene and propane from Ag(110). <i>Journal of Chemical Physics</i> , 1996, 104, 1699-1708.	3.0	20
148	Dual-Function of Alcohols in Gold-Mediated Selective Coupling of Amines and Alcohols. <i>Chemistry - A European Journal</i> , 2012, 18, 2313-2318.	3.3	20
149	The surface intermediate H ₂ COO. <i>Applications of Surface Science</i> , 1980, 5, 426-428.	1.0	19
150	Reaction of sulfur dioxide with Ag($\sqrt{2}\times\sqrt{2}$)-O: a LEED, TPRS, and STM investigation. <i>Surface Science</i> , 2002, 504, 223-234.	1.9	19
151	The adsorption of and reaction of NO ₂ on Ag(111)-p(4 \times 4)-O and formation of surface nitrate. <i>Surface Science</i> , 2005, 587, 193-204.	1.9	19
152	A paradigm for predicting selective oxidation on noble metals: oxidative catalytic coupling of amines and aldehydes on metallic gold. <i>Faraday Discussions</i> , 2011, 152, 241.	3.2	19
153	Butyrophenone on O-TiO ₂ (110): One-Dimensional Motion in a Weakly Confined Potential Well. <i>ACS Nano</i> , 2012, 6, 2925-2930.	14.6	19
154	Switching Selectivity in Oxidation Reactions on Gold: The Mechanism of C-C vs C-H Bond Activation in the Acetate Intermediate on Au(111). <i>ACS Catalysis</i> , 2014, 4, 3281-3288.	11.2	19
155	Tuning the Stability of Surface Intermediates Using Adsorbed Oxygen: Acetate on Au(111). <i>Journal of Physical Chemistry Letters</i> , 2014, 5, 1126-1130.	4.6	19
156	Chemisorption-Induced Changes in the X-Ray-Absorption Fine Structure of Adsorbed Species. <i>Physical Review Letters</i> , 1991, 67, 1653-1656.	7.8	18
157	Topographic nano-restructuring: sulfur dioxide adsorption on Cu(). <i>Surface Science</i> , 2003, 524, L84-L88.	1.9	18
158	Imaging Surface Reactions at Atomic Resolution: A Wealth of Behavior on the Nanoscale. <i>Journal of Physical Chemistry B</i> , 2003, 107, 3105-3116.	2.6	18
159	Two-dimensional condensation anisotropic crystallization: H ₂ /Ni(110). <i>Surface Science</i> , 2004, 557, 231-242.	1.9	18
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